

REMARKS

By the above amendments, claims 9-18 have been amended to depend directly or indirectly from claim 1.

As to the requirement for restriction to one of the inventions identified as Invention I - claims 1-8, drawn to an image recording device with a plurality of light sources, classified in Class 399, subclass 49; Invention II, claims 9 and 19-22, drawn to an image recording device with a source control, classified in Class 250, subclass 205; and Invention III - claims 14-18, drawn to an image recording device with printer engine function, classified in Class 358, subclass 1.5; the restriction requirement is traversed insofar as it is applicable to the present claims, and reconsideration and withdrawal of the restriction requirement are respectfully requested.

The Examiner contends that Inventions I, II and III are unrelated and refers to MPEP §806.04 and MPEP §808.01. Applicants note that the reference to the aforementioned sections in the Manual is not understood, and the requirements for restriction necessitate a showing of distinctness in accordance with appropriate provisions of the Manual, which showing of distinctness has not been properly set forth in the Office Action. Irrespective of the Examiner's contentions that the inventions are unrelated, it is apparent that by the present Amendment, claim 9 of Invention II and claims 14-18 of Invention III have been amended to dependent from claim 1 of Invention I such that a relationship is established and distinctness cannot be shown, in accordance with appropriate requirements of the MPEP.

Additionally, it is noted that the Examiner has not indicated the status of claims 10-13. That is, the Examiner has not indicated which invention claims 10-13 are considered to be part of, and in light of the absence of any such indication,

Applicants assume that claims 10-13 necessarily form part of any invention elected. It is noted, however, that claims 10-13 depend from claim 9 which has been amended to depend from claim 1. In light of such amendment, claims 9-18 necessarily form part of Invention I. Moreover, since claim 9 of Invention II has been amended to depend from claim 1 of Invention I, it is apparent that claims 19-22 of Invention II should also be considered with claim 9 which necessarily forms part of Invention I. Accordingly, Applicants submit that by the present Amendment, all of the claims necessarily form part of Invention I.

In order to provide a complete response to the restriction requirement, Applicants provisionally elect, with traverse, Invention I, including claims 1-8, as identified by the Examiner and since the Examiner has not indicated the disposition of claims 10-13, such claims should also be considered to be part of Invention I. Furthermore, in light of the amendment of claim 9 and therewith dependent claims 10-13, as well as claims 14-18 to depend directly or indirectly from claim 1 of Invention I, such claims should also be considered as part of Invention I, as this time. Further, since claims 19-22 of Invention II have been grouped with claim 9 and in light of the consideration of claim 9 as now being part of Invention I, claims 19-22 should also be considered as part of Invention I.

In view of the above amendments and remarks, Applicants submit that the restriction requirement should be withdrawn and Applicants request favorable action with respect to all claims present in this application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**.

To the extent necessary, applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (503.37438X00) and please credit any excess fees to such deposit account.

Respectfully submitted,

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ATTACHMENT A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend the claims as indicated below:

9. (Amended) An image recording device ~~equipped with~~ as claimed in claim 1, wherein said pulse-width modulating unit includes a plurality of pulse-width modulators for modulating pulse widths of a plurality of laser driving signals according to image data and a plurality of laser light sources for emitting a plurality of laser beams whose light quantities are controlled by said laser driving signals and which forms images by scanning said plurality of laser beams, said device further comprising:

means for obtaining a dispersion in pulse-width modulation of said plurality of laser driving signals and correcting said plurality of laser driving signals according to this dispersion.

14. (Amended) An image recording device as claimed in claim 1, further comprising:

a printer engine for scanning with a plurality of laser beams having different phases for printing image data;

~~a wherein said pulse-width modulator unit is~~ equipped with a plurality of pulse generating means for modulating the pulse-width of said image data with a pulse-width determined by a combination of a plurality of delay elements for each beam and outputting the pulses as print data from said pulse generating means, to said printer engine; and

a pulse-width corrector which compares the pulse-widths output from said plurality of pulse generating means by the reference pulse-width and corrects pulse-widths by a combination of said delay elements in said plurality of pulse generating means according to pulse-width differences.

15. (Amended) An image recording device as claimed in claim 1, further comprising:

a printer engine for scanning a photosensitive unit by a plurality of laser beams having different phases for printing image data;

a-wherein said pulse-width modulator unit is equipped with a plurality of pulse generating means for setting a pulse-width by a combination of a plurality of delay elements, modulating the pulse-width of said image data with said preset pulse-width, and outputting the result print data to said printer engine;

synchronization limiting means for synchronizing the pulse width modulation with said plurality of pulse generating means; and

a pulse-width corrector which corrects the pulse-width which is set by said delay elements for each pulse generating means so that each pulse-width output by said plurality of pulse generating means may be equal to the reference pulse-width in synchronization.

16. (Amended) An image recording device as claimed in claim 1, further comprising:

a printer engine for scanning a photosensitive unit by a plurality of laser beams having different phases for printing image data;

a-wherein said pulse-width modulator unit is equipped with a plurality of

pulse generating means for setting a pulse-width by a combination of a plurality of delay elements, modulating the pulse-width of said image data with said preset pulse-width, and outputting the result as print data to said printer engine,

synchronization limiting means for synchronizing the pulse width modulation with said plurality of pulse generating means, and

a pulse-width corrector which corrects the pulse-width which is set by said delay elements for each pulse generating means with a pulse width selected (as a reference pulse-width) from pulses output from said plurality of pulse generating means in synchronization so that each pulse-width output by said plurality of pulse generating means may be equal to the reference pulse-width.

17. (Amended) An image recording device as claimed in claim 1, further comprising:

a printer engine for scanning a photosensitive unit by a plurality of laser beams having different phases for printing image data;

a-wherein said pulse-width modulator unit is equipped with a plurality of pulse generating means for setting a pulse-width by a combination of a plurality of delay elements, modulating the pulse-width of said image data with said preset pulse-width, and outputting the result as print data to said printer engine;

synchronization limiting means for synchronizing the pulse width modulation with said plurality of pulse generating means;

correction image data generating means for giving image data for correction to said plurality of pulse generating means in synchronization of said plurality of pulse generating means; and

a pulse-width corrector which corrects the pulse-width which is set by said

delay elements for each pulse generating means with a pulse width selected as a reference pulse-width from pulses output from said plurality of pulse generating means in synchronization so that each pulse-width output by said plurality of pulse generating means may be equal to the reference pulse-width.

18. (Amended) An image recording device as claimed in claim 1, further comprising:

a printer engine having a beam detector for detecting a plurality of laser beams which are emitted at preset time intervals from laser sources, scanning a photosensitive unit with said plurality of laser beams, and thus printing image data;

a-wherein said pulse-width modulator unit is equipped with a plurality of pulse generating means for modulating the pulse-width of said image data with a pulse-width set by a plurality of serially-connected delay elements and outputting the modulated pulses to said printer engine;

printer interface means for generating image clocks in synchronism of beam detection signals output from said beam detector;

pixel clock selecting means for selecting said pixel clock in pulse-width correction and outputting the selected clock to said plurality of pulse generating means to synchronize pulse-width modulation with said plurality of pulse generating means; and

a pulse-width corrector which corrects the pulse-width which is set by said delay elements for each pulse generating means so that each pulse-width output by said plurality of pulse generating means may be equal to the reference pulse-width.